

GEOGRAPHIC NEWS BULLETINS

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THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated under the Federal law as a non-commercial institution for the increase of geographic knowledge and its popular diffusion.)

General Headquarters, Washington, D. C.

Contents for Week of January 16, 1933. Vol. XI. No. 26.

1. Shanhaikwan, Where China's Great Wall Meets the Sea.
 2. Iraq, Manchuria, the Chaco, and Siam in 1932 Spotlight.
 3. Volcanoes of the Andes, Safety Valves of South America.
 4. New Bridges, Dams, Highways, Canals, and Railroads of 1932.
 5. The Rio Grande, Our Most Restless Boundary.
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IRAQ RECALLS THE DAYS OF HARUN-AL-RASHID (See Bulletin No. 2).

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic News Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers for one year upon receipt of 25 cents (in stamps or money order). Entered as second-class matter, January 27, 1922, at the Post Office at Washington, D. C., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized February 9, 1922.

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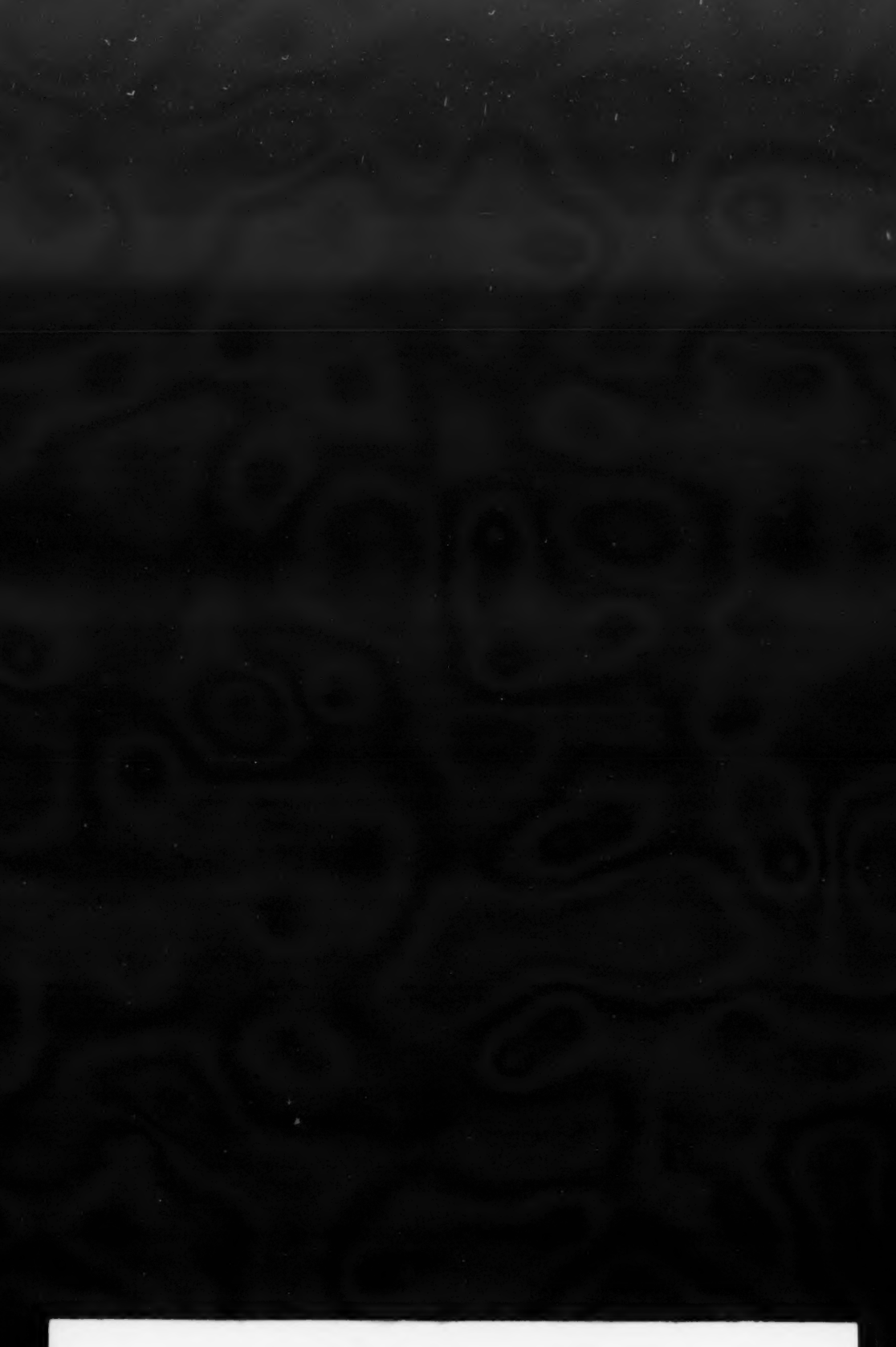


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Shanhaikwan, Where China's Great Wall Meets the Sea

CLASHES between Japanese and Chinese troops in the neighborhood of Shanhaikwan brings this border city on the coastal plain between the mountains of Jehol and the Gulf of Liaotung into the troubled situation in the Far East.

Shanhaikwan is one of the "key-cities" of the Far East. It stands on the generally accepted border line between China proper and Manchuria. With Chinchowfu, farther east, it shares the heavy railroad and highway traffic which in normal times passes along the bottle-neck plain that is the shortest land route between Peiping and Mukden.

"The First Gate of the World"

Although Shanhaikwan in recent years has not been considered a very large nor important city, it was once the door to all northern China. Here is the best preserved section of the Great Wall of China, and its celebrated eastern gate called "Under Heaven Number One Gate," or "The First Gate of the World."

Strangely enough, fortified Shanhaikwan and its part of the Great Wall was once the first line of Chinese defense against the natives of Manchuria, the Manchus. Here for thirty years the dread enemies of China were kept at bay, but here, in the battle of May 26, 1644, the Manchu leader, Wu San Kuei, managed to overcome Li Tzucheng's vastly superior Chinese forces after hours of bitter fighting in a furious sandstorm.

To-day Shanhaikwan is again an outpost of Chinese troops. The spot that once resounded to the blare of war trumpets now hears the whistle of a train following the railway line piercing the Great Wall. Popular sentiment a third of a century ago, when the line was built, would have forbidden the breaking of the Wall for such a purpose had not an opening been conveniently at hand. Legend says this gap was made at the command of a Chinese princess, who sought the body of her husband. The husband had been killed in the defense of the Wall and buried in it.

The city of Shanhaikwan itself is roughly divided into three parts—the ancient walled city proper, surrounded by three miles of fortifications 40 feet high; a walled quarter east of the city proper and outside the Great Wall; and a third section outside the west gate of the city proper. Between 80,000 and 90,000 people live in these districts, and in the small, new section around the railroad station. The Peiping-Mukden main line goes through the Great Wall but not the walled city.

Days of Fighting and Pageantry

The chief fortification at Shanhaikwan, known as Shanhaikwan Castle, was constructed in 1639, under the Ming Dynasty. It has seen some fighting, but it has also had a taste of oriental pageantry as a stopping place for Manchu rulers, en route from Peiping to ancestral shrines in Mukden or to hunting preserves along the Sungari River.

Shanhaikwan has a number of hotels and Chinese inns and a small foreign colony. During the Boxer Rebellion it was occupied by European troops. The city's name means "Mountain-Sea Barrier," or "Between Mountain and Sea," and it is well named. It lies about three miles from the foot of the dry mountain plateau leading to Inner Mongolia and an equal distance from the Gulf of Chihli.

The sea end of the Great Wall, which winds across the plain and up the face



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MANCHURIA HAS ONE OF THE WORLD'S LARGEST COAL POCKETS AT FUSHUN

Japan's stake in the newly-created State of Manchoukuo is represented by grains, starches, fertilizers, coal and iron ore, which are vitally needed to supplement the scant supplies of the Island Empire. At this great open pit colliery east of Mukden the coal is stripped from the surface and hauled to tipples at the rim, where it is dumped into railroad cars for transport to the busy steel mills of Manchuria (See Bulletin No. 2).

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Iraq, Manchuria, the Chaco, and Siam in 1932 Spotlight

REMOVAL of mandate restrictions from Iraq and its erection into an independent state was one of the outstanding changes affecting the world's family of nations during the past year. Among the other important changes were the creation of Manchoukuo, the setting up of Catalonia as an autonomous unit within the Spanish Republic, and the granting of a constitution by the King of Siam.

Iraq First Mandated Area to Become Independent

Iraq is the first of the group of mandated territories established following the World War to graduate into the group of independent nations. Great Britain gave up all of its special privileges as holder of the mandate, and the new state became a full-fledged member of the League of Nations.

Following Japanese occupation of Manchuria, that territory, together with the Province of Jehol to the west, was made into the state of Manchoukuo with Pu Yi, one-time heir to the Chinese Empire, as ruler. Western powers have not officially recognized the new state.

The granting of local self-government to Catalonia, made up of the four provinces of northeastern Spain, fulfilled aspirations which Catalonians have held for centuries. The newly-empowered state has a unique status among the major divisions of the Spanish Republic. It has its own president, parliament, cabinet, and courts, and will collect its own taxes. Foreign affairs, however, will remain under control of the central government of Madrid.

After an almost bloodless revolution during the past summer, King Prajadhipok of Siam promised a constitution. This new charter for the Siamese was made public on November 19.

In Arabia no major changes in boundaries or sovereignties took place during the year, but the principal state in the peninsula received an entirely new name. The country embracing all of central Arabia and extending from the Red Sea to the Persian Gulf, formerly known as the Kingdoms of the Hejaz and Nejd, was, early in October, given the title, "Kingdom of Saudi Arabia."

Noah's Mountain Becomes Wholly Turkish

Ararat, one of the most famous mountains in the world, changed hands during 1932. The mountain was traded to Turkey by Persia in exchange for a strip of territory along the Turkish-Persian border to the south.

Next to the fighting in Manchuria, the longest continued military conflict during 1932 over boundaries or sovereignties has been that in the Gran Chaco of South America between Bolivia and Paraguay. Each contestant demands that its title to this large region south of the center of the continent shall be recognized. In late weeks spirited fighting has continued along the string of forts which extends through the center of the Chaco.

Since June 1, Chile has had five changes in presidents, and for a time was ruled by a socialistic régime. The changes have all been effected other than by elections, but little fighting has occurred. The latest armed contest over territory in South America began in August on the Putumayo River, one of the headwater streams of the Amazon system. The dispute was initiated when Peruvian citizens seized the town of Leticia from Colombia. The community is still in the hands of Peruvians.

In the Near East a dispute between Syria and Iraq over their common boundary line between the Euphrates and Tigris rivers was advanced toward solution by a

Bulletin No. 2, January 16, 1933 (over).

of the mountains, is immensely impressive. Blocks of granite, beaten and lashed by the waves and their ally, the wind, have broken loose and extend awry into the water, toys for the rising tide.

Following the curve of the Wall, one comes suddenly upon the great winking eye of a modern white lighthouse on the old Pavilion of Literature. Practically all the Wall between Shanhaikwan and the summit of Koku Shan, nearly 2,000 feet above the city and five miles north of it, is still standing. Almost the entire upper part of this section rises in a series of stone steps, with watchtowers at frequent intervals.

Note: The *National Geographic Magazine* of February, 1933, will contain an article dealing with present-day conditions in Manchuria. See also: "Byroads and Backwoods of Manchuria," January, 1932; "Manchuria, Promised Land of Asia," October, 1929; and "A Thousand Miles Along the Great Wall of China," February, 1923.

Bulletin No. 1, January 16, 1933.



© Photograph by John D. Zumbrun

GREAT WALL OF CHINA IS AGAIN THE FRONTIER

It was to protect China from the Mongols that Chin Shih Huang Ti built the great rampart from the seacoast at Shanhaikwan to distant Kansu province, more than 2,000 years ago. Today it marks the western limit of the claims of Japanese-controlled Manchoukuo. The view above was taken from one of the towers of the Great Wall near Kupehkwow, about 150 miles inland from Shanhaikwan.

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Volcanoes of the Andes, Safety Valves of South America

ALTHOUGH the volcanoes of the Andes have been quiet since the eruptions of last April, more than 300,000 head of Chilean cattle are perishing to-day because volcanic dust thrown out during the April eruption has killed pasture grass.

The Andes of South America form at all times one of the world's most active volcanic and earthquake areas.

Part of a Great World Ridge

This great mountain range is classed by some geographers and geologists as one section of a stupendous "world ridge" that extends from near Cape Horn up the Pacific coast of the Americas to Alaska, across the Aleutians to Siberia, and down the Asiatic coast to Japan, the Philippines, New Guinea, and New Zealand. The Andes alone constitute the longest mountain range known—4,500 miles in extent. In the range are the earth's highest active volcanoes, some of them 18,000, 19,000, and even 21,000 feet above sea level.

The active vents of the Andes are in three separate groups. The northernmost group extends over Ecuador and a portion of Colombia, the middle group covers southern Peru and extends into northern Chile, and the southern group lies along the Chilean-Argentine border in the latitude of central Chile. It is this latter group that was in spectacular eruption during April, 1932.

The Andes form a wall, difficult to scale, between the narrow Pacific coast of South America and the broad reaches of the interior that drain to the Atlantic. At only three points in their long extent are the Andes completely crossed by railways. All three of these lines have their western ends in Chile.

The northernmost railway runs from Arica to La Paz, Bolivia. Three hundred and fifty miles farther south another line extends from Antofagasta into southern Bolivia and connects with lines leading southward into northern Argentina.

The most important railway over the mountains extends from Valparaiso, chief Chilean port, almost due east to Buenos Aires, capital and metropolis of Argentina. It follows for much of its route an historic road over the Pass of Uspallata on the Chilean-Argentine border. The pass is more than 12,000 feet high and at its crest stands the famous statue, the Christ of the Andes, placed there jointly by Chile and Argentina to symbolize enduring peace between the two nations. The railway crosses the border through a tunnel nearly two miles long at the 10,500-foot level.

Aconcagua, King of the Andes

Only a few miles north of Uspallata Pass rises Aconcagua, highest of the Andean peaks, 23,098 feet in altitude. The volcanic outburst in April did not extend as far north as this monarch of the Andes, nor did it threaten the Trans-Andean Railway, which recently resumed operations after a period of suspended service due to tariff disputes.

Valparaiso and Santiago, Chile's largest cities, are within eyeshot of the lower chain of volcanic peaks. The former city hugs the shore of a broad bay about midway along the Chilean coast. The city has been likened to Spanish and Italian municipalities. A portion is spread over a cliff above the busy wharf district. The two districts are connected by a dozen or more steps and elevators.

Santiago, the Chilean capital, is an inland city, lying among the Andean hills southwest of Valparaiso. In beauty Santiago ranks second only to Rio de Janeiro

report of the Syro-Iraqi Frontier Commission to the League of Nations, recommending a line which lay between those claimed by the two contestants.

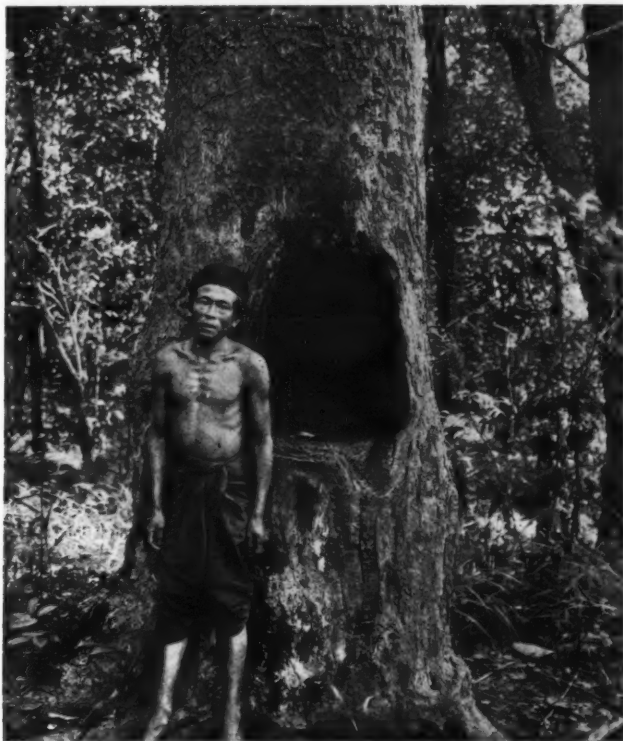
A frontier contest which involved the operation of customs between France and Switzerland was settled amicably at The Hague ('s Gravenhage) during June. The decision was in favor of Switzerland and operated to permit a free customs zone near Geneva, but in French territory.

Work toward solution of the boundary dispute between Guatemala and Honduras in Central America was carried toward a decision by an arbitration commission headed by Chief Justice Hughes. The U. S. War Department played an important part in this work by assigning Army Air Corps fliers last summer to prepare an aerial map of the disputed line.

The controversy between Norway and Denmark over portions of the east coast of Greenland is still before the Court of International Justice at The Hague.

Note: See also the new Map of the World, published by the National Geographic Society as a supplement to the December, 1932, issue of the *National Geographic Magazine*. This map includes recent boundary changes, new names, and proper spellings of the principal nations, cities, islands, and other geographic features. Extra copies of this map may be obtained postpaid by writing to the Washington, D. C., headquarters of The Society and enclosing 50 cents for each.

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A SOURCE OF LIGHT IN SIAM

In northwestern Siam the natives burn holes in the Mai Yang tree to collect a resin which they use in lamps. The road from Bampang to Chiangmai runs through beautiful groves of these trees. Siam last year was given a Constitution, and its progressive ruler has instituted many governmental and social reforms throughout the kingdom. Bangkok, the capital, has paved streets, steel bridges, modern transportation, outboard motors, movie houses, and air-conditioning.

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New Bridges, Dams, Highways, Canals, and Railroads of 1932

MAN pushed ahead on many fronts in his conquest of natural forces during 1932. Despite financial difficulties, dams, bridges, tunnels and other significant works have reached completion or progressed in all parts of the world.

Most important of the dams completed was that at Dneprostroy across the Dnieper (Dnepr) River, in the Russian Soviet Union, about 150 miles north of the Black Sea. Its construction was superintended by American engineers. The dam is 3,350 feet long and 146 feet high. The maximum capacity of its generators will be 900,000 horsepower, which compares with the 600,000 horsepower at Muscle Shoals.

Power Dams in Brazil, Canada and United States

In the state of Bahia, Brazil, a huge power dam was completed and set to furnishing energy to the city of Bahia (São Salvador). The structure is 1,150 feet long and 131 feet high.

Two widely-separated projects on the North American continent made available large amounts of energy without the construction of dams. The first was on the United States side of the Rio Grande, near Eagle Pass, Texas, where, by gravity diversion, an 80-mile canal was supplied with water whose flow will produce electric energy before being used for irrigation. The second was the Beauharnois Project, in Canada, a 15-mile power canal between Lake St. Francis and Lake St. Louis, on the south side of the St. Lawrence River near Montreal. The hydroelectric plant operated by the canal water will furnish energy to Montreal.

At the site of the Hoover Dam, on the Colorado River, between Arizona and Nevada, work on what will be the world's greatest dam is more than a year ahead of schedule. For the first time, probably, in millions of years, a section of the bed of the Colorado River at the dam site is dry. On November 13 the stream was turned into a tunnel bored in the canyon wall, and diverted for nearly a mile. On the stream bed thus left dry, the actual preparations are being made for laying the dam's foundation.

In Europe, the Moselle Canal, first planned 180 years ago, was completed. The 19-mile waterway is on the Moselle River, a tributary of the Rhine, in northeastern France, and connects Metz and Thionville. Near-by to the east, the Alsace Canal and power plant at Kembs, using Rhine water, was dedicated in October. It is the first unit in what will be one of the largest power developments in western Europe.

In the United States, the Illinois waterway, making possible barge service between Chicago and New Orleans, was completed.

Africa's north-south transportation system was bettered during the year by the building of a 100-mile section of highway connecting Nimule and Juba, terminal ports on the Nile.

Long Chilean Highway Opened

Chile announced in July the completion of its portion of the 9,800-mile Pan-American Highway, planned to extend from Canada to the southern part of South America. The Chilean section of the road is 1,577 miles long.

Italy began work on one of the first express motor-truck roads to be built. It will connect Genoa, Milan, and Turin, tapping Italy's most important industrial district.

In the United States five important Federal Government highways, opening up historic and scenic spots, were put into use: the Mount Vernon Memorial Highway, from Washington to the home of George Washington; the Trail Ridge Road in the Rocky Mountain National Park, one of the highest scenic roads in the world; the Cadillac Mountain road on Mt. Desert Island; a new scenic highway in Glacier National Park and Skyline Drive along the crest of a portion of the Blue Ridge Mountains in the Shenandoah National Park, Virginia.

Railways crept into new territory on five continents and in New Zealand. The longest new railway in the Western Hemisphere was opened in northern Argentina in August. A broad-gauge line, it connects previously existing rails and affords a short cut between Tucuman and Mendoza. It is 189 miles in length.

The Samsun-Sivas line, in the Asia Minor portion of Turkey, was completed. It extends for nearly 300 miles, connecting the Black Sea coast with central Anatolia. In New Zealand a 70-mile railway was put into operation in November in the southwestern part of North Island, between Stratford and Taumarunui. Canada began service in July on its newest rail line from Cochrane, Ontario, to Moosonee, near the southern tip of James Bay. In Nicaragua a 17-mile line gave the Republic's lake region a new outlet to the Pacific. The Fez-Oujda Railway, in French Morocco, started operations in June. It is about 100 miles long. During 1932 much of the Trans-Siberian Railway was double-tracked. Double track was also extended by the Swiss

in South America. Santiago is best viewed from Santa Lucia Hill, which rises out of the heart of the city. From there the traveler looks down upon a community of half a million people dwelling for the most part in one- and two-story houses, a city of innumerable domes and spires which join a few skyscrapers.

Mendoza Province of Argentina, which also suffered from ash clouds, is about the size of Wisconsin and lies against the Chilean border. The eastern part of the province is arid, sandy level plain, but the portion bordering the hills is fed by mountain streams. It is irrigated and is a populous agricultural district. Mendoza City, capital of the province, is 632 miles by rail northwest of Buenos Aires.

Note: The following articles in the *National Geographic Magazine* contain additional references to the Andes range and to the countries along this backbone of South America: "Air Adventures in Peru," January, 1933; "Flying the 'Hump' of the Andes," May, 1931; "World's Highest International Telephone Cable," December, 1930; "Flying the World's Longest Air-Mail Route," March, 1930; "Buenos Aires to Washington by Horse," and "Twin Stars of Chile," February, 1929; "The Volcanoes of Ecuador," January, 1929; "By Seaplane to Six Continents," September, 1928; "How Latin America Looks from the Air," October, 1927; and "A Longitudinal Journey Through Chile," September, 1922.

Bulletin No. 3, January 16, 1933.



© Photograph from Harriet Chalmers Adams

A NEW GLOW IN THE CRATER OF AN EXTINGUISHED VOLCANO

American copper interests have taken over several of the dead volcanoes of central Chile. By night the flare of electric lights reflected on the snow-covered mountainsides gives a fantastic appearance to these isolated communities. The ore is converted into metal bars near the mines, and shipped by steamer to world markets. Chile is the second largest producer of copper.

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The Rio Grande, Our Most Restless Boundary

FOR the second time in its history the Rio Grande was blocked by an ice jam in New Mexico recently. Water overflowing the levees threatened to change the course of the stream. Our southwest has suffered from unusual rains and cold this winter.

A change in course would be no new experience for the playful Rio Grande. From El Paso southward to Brownsville, where it forms the dividing line between the United States and Mexico, the Rio Grande is our most restless boundary.

Easily Waded at Certain Times

On the map the Rio Grande has the appearance, in its lower reaches, at least, of being as wide as the St. Lawrence or the Detroit rivers, along both of which large ships ply. In flood times the Rio Grande is a broad, full river; but during portions of the year, owing to little rainfall on its tributaries, seepage into the sandy soil, and appropriation for irrigation purposes, its waters dwindle away until only a narrow stream remains, dodging in and out among wide expanses of sand. Quick-sands make crossing dangerous in places, but at other points it is a simple matter to ride or to wade from bank to bank.

Because the river can be so easily crossed in times of low water, United States and Mexican officials have had stubborn problems along certain sections of the Rio Grande in the enforcement of immigration, tariff, prohibition, narcotic, and other regulations. The problems are heightened by the fact that the American side of the river is not uniformly developed and that most of the Mexican side is unutilized.

At some points on the American side the huge irrigated gardens and fields and citrus groves of the lower Rio Grande Valley reach to the river, representing land in the highest degree of cultivation. But at other points the river bank and a zone ten miles or more in width are covered with a growth of mesquite and other bushes and are virtually uninhabited.

Chinese and other aliens secretly entering the country and smugglers in both directions hide in these wilderness spots, and, when overtaken, often "shoot it out" with members of the Border Patrol.

"Wakes up in Mexico"

The Rio Grande in flood times has been equally a problem to the United States and Mexico. When the river rises unduly it eats away the fine sandy alluvial soil as though it were brown sugar, frequently forcing new channels across the narrow necks where the stream loops. When this happens the bits of land cut off ("bancos," they are called) are thrust into an alien jurisdiction. Many a river-bank resident has gone to sleep in the United States and awakened the next morning in Mexico.

All along the lower Rio Grande at one time were numerous bits of United States territory on the Mexican side of the river, and fragments of Mexico in the United States.

The situation became so complicated that the two governments finally agreed that since in the long run the shifts of territory from side to side were about equal, new channels would be taken as marking the boundary, where the bancos were small.

It was provided, however, that if fragments of territory exceeding 618 acres or having 200 or more inhabitants shall ever be cut off by the river, they shall still

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Federal Railways. San Marino, one of the smallest states, was provided with railway service for the first time during 1932. The line to the tiny republic extends 20 miles from Rimini, Italy.

The World's Shortest Railway—2,000 Feet

The world's shortest railway, in Vatican City, was completed during the year. It has a length of 600 feet in Vatican territory and extends about 1,400 feet into Italian territory to connect with Italy's rail system.

New railroad construction was practically at a standstill in the United States. Only 32 miles of new railway were constructed, while 1,380 miles of small branch line "feeders" were abandoned. Most important rail development in the United States was the steady electrification of standard railways in suburban districts. Main line electrification was completed by one railway system between New York and Wilmington. Work is progressing between the latter city and Washington.

Among the outstanding new bridges put into operation during the year were the 45-million-dollar steel arch over Sydney harbor, Australia; the Lambeth Bridge over the Thames at London; and the Benue River Bridge, in Africa, over a tributary of the Niger, rated as the longest bridge on the continent.

The most important bridge to reach completion in the United States was the Jersey City-Newark Viaduct, which is four miles long and crosses two rivers at a level to permit the passage of ocean-going ships. The structure became one of the most heavily-traveled entrances to and exits from New York City. It is estimated that 20,000,000 motors will pass over it each year.

Among other bridges completed in the United States were the Schuylkill River Bridge at Philadelphia; the Westinghouse Bridge near Pittsburgh; and the Rogue River Bridge, near Gold Beach, Oregon.

The most significant land reclamation projects were carried on in The Netherlands, where the Dutch continued to rob the Zuiderzee; and in Italy, where thousands of acres of the once malaria-infested Pontine Marshes, south of Rome, were drained and turned into farm lands.

Note: For supplementary reading see also "An Army Engineer Explores Nicaragua," *National Geographic Magazine*, May, 1932; "Cosmopolitan Shanghai," September, 1932; "Ontario, Next Door," August, 1932; "How Half the World Works," April, 1932; and "Byroads and Backwoods of Manchuria," January, 1932.

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ENGINEERS HELP TO CARRY EDUCATION INTO CANADA'S WILDS

Pupils on snowshoes and skis arrive at the railway school car, which visits remote sections of northwest Ontario on regular schedules each week. To the children of Finns, Norwegians and others of foreign birth dwelling in isolated sections, these classrooms on wheels afford a chance to learn English as well as the rudiments of a general education. Canada's newest railroad line taps the Moose River country at the foot of James Bay.

belong to the country from which they were torn, the old channel remaining as the boundary. The Rio Grande is always known by its Spanish name, and should not be written "Rio Grande River." "Rio" means "river" in Spanish.

Note: See also "By Seaplane to Six Continents," *National Geographic Magazine*, September, 1928; "So Big Texas," June, 1928; "Along Our Side of the Mexican Border," July, 1920. *Bulletin No. 3, January 16, 1933.*

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ELEPHANT BUTTE DAM ON THE RIO GRANDE, NEW MEXICO

This giant structure has one of the largest storage capacities in the world—860,000,000, 000 gallons. The project not only irrigates the middle Rio Grande country of New Mexico but also checks damage once done by sudden floods. It was on Elephant Butte Lake that Commander Francesco de Pinedo, of the Royal Italian Air Force, landed his seaplane during his famous 60,000-mile cruise to six continents in 1927-28.

